

ABSTRACT OF THE DISCLOSURE

In an electron-emitting device manufacturing apparatus for forming a surface conduction electron-emitting element by a conductive thin film, a discharge head of a piezo-jet type using a piezoelectric element has a diameter
5 being equal to or less than $\phi 25\mu\text{m}$ and jets a solution that includes metal micro-particle material for forming the conductive thin film, on the area between the electrodes, which are formed on a substrate of the electron-emitting
10 device, as a droplet. A volatile component in a solution dot pattern is vaporized after the droplet is jetted on the substrate so that a solid content is remained on the substrate. The solution having micro-particle dispersed in liquid satisfies a relationship of $0.0002 \leq D_p/D_o \leq 0.01$ where D_p
15 denotes a diameter of the metal micro-particle and D_o denotes a diameter of the discharge opening.